

Name _____

P 2-1

Mental Math: Adding

Add. Use mental math.

1. $89 + 46$

2. $301 + 61$

3. $400 + 157$

4. $722 + 158$

5. $523 + 223$

6. $804 + 396$

7. $299 + 206$

8. $878 + 534$

9. $1,000 + 7,000$

10. **Reasoning** How can you write $52 + (8 + 25)$ to make it easier to add?
- _____

Use mental math to find the cost of a pound of

11. apples and a pound of oranges.
- _____

12. bananas and a pound of grapefruits.
- _____

Fruit	Price per Pound
Apple	\$0.67
Orange	\$0.98
Banana	\$0.45
Grapefruit	\$0.82

Test Prep

13. Stanley has \$10.00. He buys bread for \$3.47 and orange juice for \$2.53. How much money does Stanley have left?

A. \$3.00 B. \$4.00 C. \$6.53 D. \$8.47

14. **Writing in Math** Explain how you could add $678 + 303$ using mental math.
- _____
- _____
- _____

Name _____

Mental Math: Subtracting

P 2-2

Subtract. Use mental math.

1. $53 - 21 =$ _____
2. $101 - 49 =$ _____
3. $224 - 26 =$ _____
4. $568 - 352 =$ _____
5. $120 - 33 =$ _____
6. $900 - 187 =$ _____
7. $141 - 98 =$ _____
8. $409 - 11 =$ _____
9. $554 - 59 =$ _____

10. **Number Sense** To subtract 37 from 462 using mental math, you first subtract 40 from 462 and get 422. What should you do next to get the final answer?
- _____

Use mental math to find the difference in height between

11. Angel and Tugela.
- _____

12. Yosemite and Cuquenan.
- _____

World-Class Waterfalls

Name	Height (meters)
Angel	979
Tugela	948
Yosemite	739
Cuquenan	610

Test Prep

13. Dana has 205 cm of ribbon. She uses 64 cm of ribbon to tie a package. Which simpler problems could she use to find out how much ribbon she has left?

- | | |
|-----------------------------|-----------------------------|
| A. $205 - 60$ and $145 - 4$ | B. $205 + 64$ and $269 + 1$ |
| C. $205 - 60$ and $145 + 4$ | D. $200 - 64$ and $136 - 5$ |

14. **Writing in Math** Explain how you would count on to find $350 - 156$.
- _____
- _____
- _____

Estimating Sums and Differences**P 2-3**

Estimate each sum or difference.

1.
$$\begin{array}{r} 627 \\ + 95 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 829 \\ - 292 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 987 \\ - 233 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 1,568 \\ + 352 \\ \hline \end{array}$$

5. $4,263 - 1,613$ _____

6. $7,502 + 2,187$ _____

7. $24,141 - 2,177$ _____

8. $64,099 - 55,555$ _____

9. $83,595 + 18,999$ _____

10. About how much larger is the largest ocean than the smallest ocean?
-
- _____
-
- _____
-
- _____

Ocean Area

Ocean	Area (million sq km)
Arctic Ocean	13,986
Atlantic Ocean	82,217
Indian Ocean	73,481
Pacific Ocean	165,384

11. About how many million square kilometers do all the oceans together cover?
-
- _____
-
- _____

Test Prep

12. Mallory is a pilot. Last week she flew the following round trips in miles: 2,020; 1,358; 952; 2,258; and 1,888. Which of the following is a good estimate of the miles Mallory flew last week?

A. 6,000 mi B. 6,800 mi C. 7,600 mi D. 8,600 mi

- 13.
- Writing in Math**
- Explain how you would use front-end estimation to subtract 189 from 643.
-
- _____
-
- _____



Determine the sum to the following problems.

Answers

- 1) At the dog show there were 839 large dogs and 840 small dogs. To the nearest ten, how many dogs were at the dog show?
- 2) A donation center received 103 cans of corn and 402 cans of peas. To the nearest hundred, how many cans did they receive total?
- 3) Carl and Amy were collecting cans for recycling. Carl collected 346 cans and Amy collected 673. To the nearest hundred, what is the total number of cans they collected?
- 4) In one month a furniture store sold 268 plastic chairs and 283 wooden chairs. To the nearest hundred, how many chairs did they sell total?
- 5) Vanessa was downloading apps to her phone. The first app she downloaded was 748 kb and the second was 341 kb. To the nearest ten, what was the total size (in kb) of all the apps she downloaded?
- 6) A cookie company held a poll asking customers their favorite type of cookie. 712 people said chocolate chip and 148 said oatmeal. To the nearest ten, what is the combined number of votes for both cookies?
- 7) Katie was preparing for a marathon. In the morning she jogged 540 meters and in the afternoon she jogged another 495 meters. To the nearest ten, how many meters did she jog total?
- 8) A candy company sells 711 boxes of sugar candy and 958 boxes of chocolate candy every day. To the nearest ten, what is the sum of the boxes of candy they sell?
- 9) A chef was buying different soups. She bought 450 cans of chicken soup and 441 cans of mushroom soup. To the nearest hundred, how many can of soup did she buy all together?
- 10) Larry was reading through his favorite book series. The first book he read had 995 pages and the next book had 888 pages. To the nearest hundred, how many pages were in both books?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Name _____

Column Addition

P 2-6

Add.

$$\begin{array}{r} 1. \quad 486 \\ 875 \\ + 45 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad \$43.34 \\ 49.48 \\ + 8.90 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 938 \\ 1,487 \\ + 8,947 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 7,226 \\ 1,587 \\ + 72,984 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad \$542.36 \\ 2.23 \\ + 78.56 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 80 \\ 960 \\ 4 \\ + 1,986 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad \$279.87 \\ 20.96 \\ 150.98 \\ + 79.45 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 8,738 \\ 5,234 \\ 836 \\ + 237 \\ \hline \end{array}$$

9. **Number Sense** Luke added $429 + 699 + 314$ and got 950. Is this sum reasonable?

10. What is the combined length of the three longest glaciers?

World's Longest Glaciers

Glaciers	Length (miles)
Lambert-Fisher Ice Passage	320
Novaya Zemlya	260
Arctic Institute Ice Passage	225
Nimrod-Lennox-King	180

11. What is the total combined length of the four longest glaciers in the world?

Test Prep

12. Which is the sum of $3,774 + 8,276 + 102$?
- A. 1,251 B. 12,152 C. 13,052 D. 102,152
13. **Writing in Math** Leona added $6,641 + 1,482 + 9,879$. Should her answer be more than or less than 15,000?



Determine the sum to the following problems.

Answers

- 1) While working on his car, Oliver spent 515 bucks on a new paint job, \$365 on the transmission and 594 dollars on the interior. How much money did he spend total?
- 2) A zoologist was checking the weights of three gorillas. Gorilla A weighed 758 pounds, gorilla B weighed 464 pounds and gorilla C weighed 203 pounds. What is the combined weight of all three gorillas?
- 3) At Bianca's school there are 190 students in 3rd grade, 829 students in 4th grade and 602 students in 5th grade. How many students were there in all three grades?
- 4) Ned was playing games at the arcade. He won 320 tickets from the basketball game, 482 tickets from whack-a-mole and 453 tickets from the coin push game. How many tickets did he get total?
- 5) An ice cream shop sold 875 chocolate cones, 810 vanilla cones and 729 strawberry cones. How many cones did the ice cream shop sell all together?
- 6) A school had 658 red pens, 786 blue pens and 664 black pens. How many pens did they have total?
- 7) A candy company sells 247 boxes of sugar candy, 419 boxes of chocolate candy and 769 boxes of gum candy every day. What is the sum of the boxes of candy they sell?
- 8) In one month a furniture store sold 708 plastic chairs, 679 wooden chairs and 911 metal chairs. How many chairs did they sell total?
- 9) For her birthday Wendy received 556 dollars from her friends and another 337 dollars from her family. If she already had 302 dollars, how much money would Wendy have total?
- 10) Over the summer Vince earned 743 dollars mowing lawns, another 732 dollars weed eating and 550 dollars spraying for weeds. How much money did Vince make total?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____



Determine the sum to the following problems.

Answers

- 1) At the zoo a photographer took 1,136 pictures of animals. If 178 of the pictures were blurry and another 232 were off centered, how many good pictures did he end up taking?
- 2) An ice cream had 2,283 ice cream cones in stock. They sold 518 cones on Saturday and 845 more on Sunday. How many cones did the ice cream shop have left?
- 3) Over the summer Sam earned 2,378 dollars doing lawn care (mowing, weed eating and weed spraying). If he earned 964 dollars weed eating and 972 dollars mowing lawns, how much money did he earn with his weed spraying?
- 4) Sam's favorite book trilogy had 781 pages total. If the first book was 100 pages and the last book was 385 pages, how many pages was the second book?
- 5) Sam collected 3 rocks from his garden. All together they weighed 1,906 grams. If the first rock weighed 900 grams and the third rock was 827 grams, how much did the second rock weigh?
- 6) In a math book, there were 2,069 problems in the first three chapters. If chapter one has 364 problems and chapter two has 837 problems, how many problems are there in chapter three?
- 7) While building a house, an architect used 1,574 nails. If he used 832 nails on the first floor and 381 on the roof, how many nails did he use in other places?
- 8) A donation center was trying to get a total of 1,070 cans. If they received 485 cans the first day and another 234 the second day, how many more cans did they need to get to reach their goal?
- 9) A shipping company had 1,680 boxes to ship out. If they sent out 621 in the morning and 223 in the afternoon, how many would they need to ship out that night to have shipped all the boxes?
- 10) A large gumball machine had 3 flavors of gumball in it, with 1,661 gumballs total. If 949 were cherry flavored and 255 were banana flavored, how many were apple flavored?

1.	_____
2.	_____
3.	_____
4.	_____
5.	_____
6.	_____
7.	_____
8.	_____
9.	_____
10.	_____

Name _____

Choose a Computation Method

P 2-8

Add or subtract. Tell what method you used.

1.
$$\begin{array}{r} \$5,749 \\ + 8,274 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 84,936 \\ - 27,946 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 70,000 \\ + 30,000 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 56,935 \\ + 3,964 \\ \hline \end{array}$$

5.
$$\begin{array}{r} \$95,629 \\ - 7,846 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 26,000 \\ - 4,000 \\ \hline \end{array}$$

7. $\$3,210 - \$1,989 =$ _____

8. $4,440 + 560 =$ _____

9. An African elephant weighs 11,023 lb. An Asian elephant weighs 8,818 lb. What is the total combined weight of an African elephant and an Asian elephant?

10. A hippopotamus weighs 4,409 lb. A white rhinoceros weighs 4,850 lb. How much less does the hippopotamus weigh than the white rhinoceros?

Test Prep

11. Which number sentence is easiest to compute using mental math?

A. $1,502 - 685$ B. $1,530 + 120$ C. $652 + 989$ D. $1,596 + 3,628$

12. **Writing in Math** Explain how you would use mental math to find $1,201 + 8,793$. Solve.

Look for a Pattern

Look for a pattern. Draw the next two shapes.



Look for a pattern. Write the missing numbers.

3. 5, 8, 11, 14, 17, _____, _____ 4. 4, 6, 10, 16, 24, _____, _____

Look for a pattern. Complete each number sentence.

5. $80 + 8 = 88$

6. $10 + 1 = 11$

$808 + 80 = 888$

$100 + 1 = 101$

$8,008 + 880 = \underline{\hspace{2cm}}$

$1,000 + 1 = \underline{\hspace{2cm}}$

$80,808 + 8,080 = \underline{\hspace{2cm}}$

$10,000 + 1 = \underline{\hspace{2cm}}$

Look for a pattern. Write the missing numbers.

7. Sally went to purchase tiles for her kitchen floor. She measured the floor to find how many tiles she needed to cover the floor. Sally decided to make a pattern. She chose 10 red tiles,

20 beige tiles, 30 white tiles, _____ black tiles, and _____ gray tiles to complete a pattern for the kitchen floor.

8. **Reasoning** Fill in the missing amounts to update Carl's savings passbook.

Carl's Savings Account

Date	Deposit	Balance
4/7	\$25	\$945
4/14		\$995
4/21	\$25	
4/30	\$50	
5/7		\$1,095



Determining Pattern Rules

Name: _____

Determine what rule the pattern is using.

Answers

- 1) 56 , 52 , 48 , 44 , 40 Rule: _____
- 2) 97 , 78 , 59 , 40 , 21 Rule: _____
- 3) 10 , 13 , 16 , 19 , 22 Rule: _____
- 4) 4 , 24 , 44 , 64 , 84 Rule: _____
- 5) 6 , 23 , 40 , 57 , 74 Rule: _____
- 6) 62 , 47 , 32 , 17 , 2 Rule: _____
- 7) 7 , 23 , 39 , 55 , 71 Rule: _____
- 8) 12 , 17 , 22 , 27 , 32 Rule: _____
- 9) 32 , 24 , 16 , 8 , 0 Rule: _____
- 10) 59 , 46 , 33 , 20 , 7 Rule: _____
- 11) 3 , 16 , 29 , 42 , 55 Rule: _____
- 12) 18 , 22 , 26 , 30 , 34 Rule: _____
- 13) 13 , 27 , 41 , 55 , 69 Rule: _____
- 14) 8 , 19 , 30 , 41 , 52 Rule: _____
- 15) 37 , 30 , 23 , 16 , 9 Rule: _____

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

**Determine which letter best answers the question.****Answers**

- 1) The chart below shows how many cans you can fit in a certain number of bags. How would you determine the number of cans you'd have for 11 bags?

Bags	Cans
4	16
5	20
6	24
7	28
8	32

- A. Add 4 to 32
B. Multiply 11 by 32
C. Multiply 11 by 4
D. Add 16 to 11

- 2) Tom was keeping track of the money he had at the end of each day. If the trend continues, how would you determine how much money he'd have on day 12?

Days	Money
4	6
5	7
6	8
7	9
8	10

- A. Add 2 to 10
B. Add 12 to 2
C. Multiply 12 by 2
D. Multiply 12 by 4

1. _____
2. _____
3. _____
4. _____

- 3) The chart below shows how many drawings Sam drew each day. If the trend continues, how would you determine how many drawings he'd make on day 13?

Days	Drawings
4	13
5	14
6	15
7	16
8	17

- A. Multiply 13 by 4
B. Add 9 to 17
C. Multiply 13 by 9
D. Add 13 to 9

- 4) The chart below shows the number of milk cartons you get for the number of dollars you give. How would you determine the amount of milk you'd get for 9 dollars?

Dollars	Milk Cartons
1	6
2	12
3	18
4	24
5	30

- A. Multiply 9 by 6
B. Add 6 to 30
C. Multiply 9 by 30
D. Add 6 to 9

Name _____

PROBLEM-SOLVING SKILL

P 2-10

Translating Words to Expressions

Write a number expression for each phrase.

1. 1,285 is how much more than 622? _____

2. \$402 increased by \$86 _____

3. 946 beads, then 80 fewer beads _____

4. 12 adults combined with 26 children _____

Write a number expression and then solve.

5. How many people do the 8 in. salad bowl and the 12 in. salad bowl serve together?

6. How much more money does the 12 in. salad bowl cost compared to the 10 in. one?

Cathy's Salads

Size	Servings	Price
8 in. bowl	4	\$12.00
10 in. bowl	6	\$15.00
12 in. bowl	8	\$18.00

Write a number expression for the situation.

7. The bicycle museum had 220 fewer visitors this month than last month, when 980 people visited. How many people visited the museum this month?

8. **Writing in Math** Write a word problem that can be solved using the expression $96 - 23$.

Matching Words and Number Expressions

Choose the number expression that matches the words. Then, find its value.

1. Jaleesa made 24 blueberry muffins. She gave 10 muffins to her friends. Then Jaleesa made 2 more muffins.

$$24 - (10 + 2) \text{ or } (24 - 10) + 2$$

2. Antoine brought 24 bottles of juice to the picnic. The 14 people at the picnic each had 1 juice with their lunch. After the kids played soccer, Antoine's dad arrived with 12 more bottles of juice.

$$(24 - 14) + 12 \text{ or } 24 - (14 + 12)$$

Choose the number expression that matches the words. Then, find its value.

3. Saturn has 18 moons, Jupiter has 16 moons, and Neptune has 8 moons. How many more moons do Saturn and Jupiter have combined than Neptune?

$$(18 + 16) - 8 \text{ or } 18 + (16 - 8)$$

Test Prep

4. Which of the following is the value of the number expression $50 - (17 + 18)$?

A. 25

B. 20

C. 15

D. 10

5. **Writing in Math** Explain which operation you would do first in the expression $47 - (17 + 12)$.
-
-

Name _____

Evaluating Expressions

P 2-12

Evaluate each expression for $y = 15$.

1. $y + 15$ _____

2. $y + 39$ _____

3. $85 - y$ _____

4. $51 - y$ _____

Find the missing numbers in each table.

5.

n	$n + 35$
2	
10	45
15	
95	

6.

x	$75 - x$
9	
25	50
35	
52	

7. Kiara saved \$27. She bought her mother a gift. She has \$13 left. How much did she spend on the gift?

8. Carlos had 11 cans of paint. He used 4 cans painting the garage. He bought 2 more cans. How many cans of paint does Carlos have now?

Test Prep

9. Which is the value of $a + 235$ when $a = 150$?

A. 85

B. 150

C. 385

D. 485

10. **Writing in Math** Explain how to evaluate $44 + x$ for $x = 34$.



Determine the value of the missing number (variable).

Answers

- | | |
|--|--|
| <p>1) Before his birthday Grant had \$851. After his birthday, he had a total of \$1588. How much money did he get for his birthday?</p> <p>3) While shopping, Chubba bought 671 new video games. With the new games, he now has 1401 video games total. How many games did he have originally?</p> <p>5) Cash was playing basketball. In the second quarter he scored 323 points. If this brought his total score to 910 points, how many points did he score in the first quarter?</p> <p>7) Race and his friends were playing a trivia game. When the game was over they had scored 1087 points. If Race scored 382 of the points, how much did his friends score?</p> <p>9) Zackary sharpened 909 pencils in two days. On the first day he sharpened 556. How many pencils did he sharpen on the second day?</p> | <p>2) Kennedy was counting the number of people in the cafeteria. After she finished counting, 753 more people came in, which made the total number of people 1555. How many people were originally in the cafeteria?</p> <p>4) Shelby was selling candy for the school fundraiser. On the first day she had only sold 711. By the third day she had sold 1273 total. How many pieces did she sell on the second day?</p> <p>6) Destiny and Katie were helping to pick up paper for recycling. Together they picked up 899 papers. If Destiny picked up 169 pieces, how many did Katie pick up?</p> <p>8) Sierra was helping a friend bake cookies. After they finished the chocolate chip cookies, they made 449 raisin cookies. If they baked 868 cookies total, how many were chocolate chip?</p> <p>10) Maeghen had 496 DVDs. After a shopping spree, she had 885 total. How many DVDs did she buy while she was shopping?</p> |
|--|--|

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Name _____

Algebra Cadabra!

E 2-13
ALGEBRA

Find the value for x in the following exercises.

1. $x + 7 + x = 15$ _____

2. $6 + 8 - x = 11$ _____

3. $6 + x + 6 = 15$ _____

4. $23 - 7 - x = 9$ _____

5. $10 + 4 + x = 22$ _____

6. $25 - x - x = 15$ _____

7. $12 + 24 - x - x - x = 18$ _____

8. $x + 5 + x + 4 = 27$ _____

9. $x + x + x - 4 - 3 - 2 = 12$ _____

10. $14 + x - 11 - x + x - 3 = 1$ _____

11. $29 + 31 + 40 - x - x - x - x - x = 0$ _____

12. $x + x + x + 6 + x + 4 + x + 9 + x = 67$ _____

13. $9 - 1 + x + 4 + x + x - 5 + x + x + x = 61$ _____

14. $x - 5 + x - 8 + x + x + 3 + 12 + 10 + x + x = 72$ _____

15. $46 - 3 + x + x + x + x + x + x + x - 15 = 42$ _____

A Piece of History

The Statue of Liberty, located on Liberty Island in New York, was given to the United States as a present from France on July 4, 1884. The statue was still in France at the time. It was taken apart and then shipped in sections to the United States in 1885.

A total of 350 pieces of the statue were shipped on the French transport ship *Isero*. The pieces were shipped in a total of 214 crates.

1. Suppose that, after arriving in the United States, it took two days to remove the first 108 crates. How many crates were still on the ship?

2. Suppose four different pieces of the statue had the following weights: 4,219 lb; 3,182 lb; 876 lb; and 1,215 lb. Find the total weight of the four pieces.

3. Admission to the Statue of Liberty is free. In 2002, the price for three adults to ride the ferry round trip was \$21. The price for five adults was \$35. What is the round-trip price for one adult?

4. Suppose there are 13 children who take the ferry during one trip to the Statue of Liberty. A total of 51 people take the trip. Write a number sentence to find the number of adults who take the ferry. Solve. Write your answer in a complete sentence.



2 Step Problems

Name: _____

Determine the answer for the following problems.

Answers

- 1) At the schools book fair Will bought twenty-two adventure books and fifteen mystery books. If twenty-four of the books were used, how many new books did he buy?
- 2) There were thirty-one girls and thirty-seven boys trying out for the schools basketball team. If only sixteen of them got called back, how many students didn't make the cut?
- 3) Mike had to wash forty-seven short sleeve shirts and forty-eight long sleeve shirts before school. If he had only washed forty-seven of them by the time school started, how many did he not wash?
- 4) Will started his own lawn mowing business. In the spring he made twenty-three dollars mowing lawns and in the summer he made nine dollars. If he had to spend eleven dollars buying supplies, how much money did he end up with?
- 5) A waiter at 'The Greasy Spoon' restaurant had forty-eight customers to wait on. During the lunch rush he added another seventeen customers. If twelve of the customers didn't leave him a tip, how many customers did leave a tip?
- 6) While on vacation, Nancy took thirty-two pictures at the zoo and five at the museum. If she later deleted twenty-three of the pictures, how many pictures from her vacation did she still have?
- 7) Bobby had twenty-one dollars. For his birthday he got thirty-nine more dollars but spent twenty-three on a new game. How much money does he have now?
- 8) While shopping, Olivia bought forty-six green towels and thirty-nine white towels. If she gave her mother sixty-six of them, how many towels did Olivia end up with?
- 9) At the arcade, Larry won twenty-three tickets playing 'whack a mole' and eighteen tickets playing 'skee ball'. If he spent seven of his tickets on a hat, how many tickets does Larry have left?
- 10) Rachel was playing a trivia game. In the first round she scored twenty-nine points. In the second round she scored three points and in the last round she lost twenty-six points. How many points did she have at the end of the game?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____